IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

COBBLESTONE WIRELESS, LLC,
    Plaintiff,
 	
v.
 	
T-MOBILE USA, INC.
    Defendant,
 	
NOKIA OF AMERICA CORPORATION,
ERICSSON INC.
    Intervenors.
	Case No. 2:22-cv-00477-JRG-RSP
	(Lead Case)
	
	JURY TRIAL DEMANDED

COBBLESTONE WIRELESS, LLC,
    Plaintiff,
 	
v.
 	
AT&T SERVICES INC.; AT&T MOBILITY
LLC; AT&T CORP.
    Defendant,
 	
NOKIA OF AMERICA CORPORATION,
ERICSSON INC.
    Intervenors.
	Case No. 2:22-cv-00474-JRG-RSP
	(Member Case)
	
	JURY TRIAL DEMANDED

COBBLESTONE WIRELESS, LLC,
    Plaintiff,
 	
v.
 	
CELLCO PARTNERSHIP D/B/A VERIZON
WIRELESS.
    Defendant,
 	
NOKIA OF AMERICA CORPORATION,
ERICSSON INC.
    Intervenors.
	Case No. 2:22-cv-00478-JRG-RSP
	(Member Case)
	
	JURY TRIAL DEMANDED

PLAINTIFF COBBLESTONE WIRELESS, LLC'S
REPLY CLAIM CONSTRUCTION BRIEF

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TABLE OF AUTHORITIES

I.   **U.S. PATENT NO. 8,891,347 ("THE '347 PATENT")**

A.   **"the channel estimation [that includes the]/[including] path parameter information"**

Although Defendants purport to change their proposed construction to "No construction necessary; plain and ordinary meaning," they seek, in substance, an affirmative construction that "the channel estimation" refers to "the algorithm that is performed in the preceding step" in each context where it appears.[1] But, presumably recognizing that this construction does not make sense within the claim context, Defendants now propose further rewriting the claim language, splitting the term "the channel estimation *that includes* the path parameter information" into two limitations: "the channel estimation" *and* "the path parameter information." Resp. Br. at 3 ("Presumptively, the patentee intended to, and did, claim sending *both the channel estimation and the path parameter information* in limitation 1[d].").[2]

"Includes" does not mean "and." A POSITA would understand "includes" to mean that the channel estimation is itself information; Dr. Cooklev explains that "it does not make logical sense to say that an 'algorithm' includes the path parameter information." Cooklev Decl. ¶¶ 31, 33. Defendants' new misreading only highlights the fact that the "algorithm" construction contradicts the plain and ordinary meaning of the actual claim language.

Defendants also do not and cannot explain away the contradictions their construction poses in the limitation "predistorting a second signal … according to the channel estimation," or in claim 15, which does not include any limitation of "performing a channel estimation" at all (the supposed "algorithm that is performed in the preceding step" limitation).

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[1] Defendants rewrote Plaintiff's proposed construction in the summary table in their brief, substituting new prose under the heading "Cobblestone's Proposed Construction" without clarifying that those are Defendants' words, not Cobblestone's.

[2] All emphasis added unless otherwise noted.

Microprocessor Enhancement Corp. v. Texas Instruments Inc., 520 F.3d 1367 (Fed. Cir. 2008) controls here. Defendants do not cite a single case distinguishing or limiting the holding on which Cobblestone relies—that different occurrences of the same term can have different meanings if the meaning of each occurrence is "readily apparent" from the context and "a uniform construction" would lead to a "nonsensical reading." *Id.* at 1376. Although the construction dispute in *Microprocessor Enhancement* did arise in the context of a pre-*Nautilus* indefiniteness challenge, nothing suggests that its common-sense holding is limited to that context. *See id.* at 1375-77.

II.   U.S. PATENT NO. 9,094,888 ("THE '888 PATENT")

A.   "adaption manager"

i.   § 112 ¶ 6 does not apply to "adaption manager"

The "adaption manager" term does not use "means" language. "The failure to use the word 'means' creates a rebuttal presumption that § 112 ¶ 6 does not apply." *Zeroclick, LLC v. Apple Inc.*, 891 F.3d 1003, 1007 (Fed. Cir. 2018). Defendants do not even address this presumption, despite bearing the burden to rebut it. *See* Resp. Br. at 8-13; *Zeroclick*, 891 F.3d at 1008 (reversing district court and holding it "legally erred by not giving effect to the unrebutted presumption against the application of § 112, ¶ 6"). Rather, Defendants allege in conclusory fashion that "manager" is a nonce word because "means" can be grammatically substituted for it. *See* Resp. Br. at 8-9. In *Zeroclick*, the Federal Circuit rejected this "substitution" approach to "bring the disputed claim limitations within the ambit of § 112, ¶ 6" for three reasons: (1) "the mere fact that the disputed limitations [may] incorporate functional language does not automatically convert the words into means for performing such functions;" (2) this approach "removed the terms from their context" in view of the patent claims and specification; and (3) there was no evidence that the term at issue "is used in common parlance as a substitution for 'means.'" 891 F.3d at 1008-09. The Court should reject Defendants' "substitution" approach for the same three reasons here.

Defendants imply "adaption manager" itself must have "a known meaning in the art," and the "'adaption' prefix" itself must connote structure. Resp. Br. at 8-9. Neither showing is required. Rather, "[w]hen evaluating whether a claim limitation evokes § 112, ¶ 6 the essential inquiry remains 'whether the words of the claim are understood by [POSITAs] to have a sufficiently definite meaning as the name for structure.'" *Zeroclick*, 891 F.3d at 1007 (quoting *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1348 (Fed. Cir. 2015)). "That determination must be made under the traditional claim construction principles, on an element-by-element basis, and ***in light of the evidence intrinsic and extrinsic to the asserted patents***." *Id.* There is no requirement that the claim term itself, divorced from the context of the evidence of record, connotes structure.

Defendants' reliance on Figure 3 similarly falls flat. Defendants ignore the specification explaining that "adaption manager 122" comprises structural components, including "adapt logic 310," "control logic 320," "memory 330," and "I/O interfaces 340." Defendants do not dispute that memory and I/O interfaces are structural. Resp. Br. at 8-13. Nor could they. A POSITA would readily recognize that both are physical structural components. *See, e.g.*, '888 patent at 9:54-10:7; Cooklev Decl. ¶ 46. In addition, "adapt logic 310 and control logic 320" are likewise structural, as they "may separately or collectively represent a wide variety of logic device(s)" such as "one or more of a computer, a microprocessor, a microcontroller, a [FPGA], an [ASIC], a sequestered thread or a core of a multi-core/multi-threaded microprocessor or a combination thereof." '888 patent at 9:20-28; Cooklev Decl. ¶ 41. It is well-established that such physical computing devices convey sufficient structure to a POSITA. *See, e.g.*, *Samsung Elecs. Am., Inc. v. Prisua Eng'g Corp.*, 948 F.3d 1342, 1354 (Fed. Cir. 2020); Op. Br. at 13 (collecting cases).

In their argument to the contrary, Defendants liken this case to *Egenera, Inc. v. Cisco Systems, Inc.* (Resp. Br. at 10-12), in which the Federal Circuit found "logic to modify" was subject

to § 112(f) treatment when it merely "denoted 'software, firmware, circuitry, or some combination thereof.'" 972 F.3d 1367, 1374 (Fed. Cir. 2020). But here, the specification specifically describes its "logic" in the context of physical computing devices. *See, e.g.*, *Netlist, Inc. v. Samsung Elecs. Co.*, No. 2:22-cv-00293-JRG, 2023 WL 8101855 (E.D. Tex. Nov. 21, 2023) ("logic" is structural where the specification disclosed "PLDs, ASICs, FPGAs, and CPLDs as 'logic elements'"); Op. Br. at 12 (collecting cases). And "logic" is of course not the term at issue here.

Moreover, there is extensive intrinsic evidence, largely from the claim itself, illustrating "adaption manager" is structural. In particular, the intrinsic record shows the "adaption manager" has inputs (such as a handoff request that it receives), outputs (such as beam adaption information that it communicates to the antenna array and confirmation of acceptance of a handoff request it transmits), and structural connections (such as coupling to the antenna array). *See* Op. Br. at 9-10 (and citations therein). Defendants ignore this evidence and instead, again, myopically focus on Figure 3, claiming that "[t]he only 'input' and 'output' shown in Figure 3 is a generic box labeled 'I/O Interface.'" Resp. Br. at 10-11. But that is precisely the structural component through which the "adaption manager" receives its inputs and outputs. *See* Op. Br. at 13; Cooklev Decl. ¶ 46.

To the extent Defendants are contending *Williamson* rejected the notion that the context of the claims and specification—including disclosure of inputs, outputs, and structural connections—can convey structure to a POSITA (*see* Resp. Br. at 12), Defendants are wrong. The intrinsic record must be considered in deciding whether to apply § 112 ¶ 6. The Federal Circuit has cited *Apple v. Motorola, Inc.*, 757 F.3d 1286 (Fed. Cir. 2014) for this principle long after *Williamson* was decided. *See, e.g.*, *Dyfan, LLC v. Target Corp.*, 28 F.4th 1360, 1366 (Fed. Cir. 2022). And, of course, other controlling case law stands for the same principle. *See, e.g.*, *Zeroclick*, 891 F.3d at 1007.

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Finally, Defendants contend Cobblestone "ignores the well-established 'how' requirement from all of the cited cases," pointing out that "[t]he *Apple* court reasoned that '[t]he limitation's operation is more than just its function; it is *how* the function is achieved in the context of the invention." Resp. Br. at 12-13 (quoting *Apple*, 757 F.3d at 1299) (emphasis in Resp. Br.). Even assuming *arguendo* this "how" requirement exists, Cobblestone extensively addressed it in its opening brief, including by analogizing to the very cases Defendants cite. For example, in *Intelligent Water Solutions v. Kohler Co.*, this Court held "[t]he claims themselves connote sufficiently definite structure by describing **how** the 'remote system monitoring control device' operated within the claim invention to achieves its objectives" in part because "[c]laim 1 … recites that it '**operates to receive signals from** said system control means and/or said one or more system sensor(s).'" No. 16-cv-689-JRG-RSP, 2017 WL 2444723, at *13-14 (E.D. Tex. June 5, 2017). In other words, inputs, outputs, and structural connections illustrate **how** the "adaption manager" operates within the invention and thus illustrate it is structural in nature.

ii.   **Even if § 112 ¶ 6 does apply, "adaption manager" is not indefinite.**

Defendants claim that if § 112 ¶ 6 does apply, "the term 'adaption manager' is indefinite because the specification points to a generic computer with no corresponding algorithm to support it." Resp. Br. at 14 (citing *Rain Computing, Inc. v. Samsung Elecs. Am., Inc.*, 989 F.3d 1002, 1007 (Fed. Cir. 2021)). But Defendants' argument is based on a false premise—that the corresponding structure is limited to the exemplary "logic devices" disclosed in the specification—"one of more of a computer, microprocessor, a microcontroller, a [FPGA], an [ASIC], a sequestered thread or a core of a multi-core/multi-threaded microprocessor or a combination thereof." *Id.* (quoting '888 patent at 9:23-28). Not so. In addition to one or more of those "logic devices," which comprise adaption manager 122's "adapt logic 310" and/or "control logic 320," adaption manager 122 also comprises "memory 330" and "I/O interfaces 340." '888 patent at 9:6-28, Fig. 3. The

corresponding structure disclosed in the specification is therefore not limited to "a computer or microprocessor programmed to carry out an algorithm" as Defendants contend, rendering Defendants cited authority requiring disclosure of a specific algorithm inapplicable. Resp. Br. at 14-15; *see also G+ Commc'ns LLC v. Samsung Elecs. Co.*, No. 2:22-cv-00078-JRG, 2023 WL 4534366, at *12-13 (E.D. Tex. July 13, 2023) (rejecting argument that a term was indefinite for "fail[ure] to disclose any algorithm or circuit design for the function" where the corresponding structure included a processor as well as other physical components).

Defendants then, quite confusingly, contend that if § 112 ¶ 6 applies, Cobblestone cannot point to "adaption manager 122" as the corresponding structure because "the 'adaption manager' has already been found *to not* connote structure" if the Court is engaging in the "corresponding structure" analysis. Resp. Br. at 15 (emphasis in original). Defendants cite no authority for this proposition. It appears Defendants are equating a determination § 112 ¶ 6 applies with a determination that the specification does not disclose adequate structure. These are of course two separate inquiries, as Defendants' approach would lead to the absurd outcome that there could be no means-plus-function claims terms that are definite. And critically, Defendants do not dispute that "adaption manager 122" is "clearly link[ed]" to the claimed functions. *See Williamson*, 792 F.3d at 1352; Op. Br. at 14-15. Defendants' contention that "adaption manager 122" (and equivalents of it) cannot be the corresponding structure should be rejected.

B. "predetermined network load"

Defendants do not identify any lack of reasonable certainty of the *scope* of this term. They do not suggest that "network load" is unclear in the context of the claims. Nor do they suggest that it is unclear what it means for such a network load to be "predetermined" in the context of the claims. To the contrary, Defendants' expert unambiguously states what he believes a POSITA would understand "predetermined" to mean. Proctor Decl. ¶ 56.

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Instead, Defendants point to alleged deficiencies in the disclosures of "predetermined network load" in the specification, characterizing them as "minimal" and not "in the context of beam adaption." Resp. Br. at 16-17. Both of these criticisms are false. Even Defendants identify three distinct places where the specification describes how the systems described make use of "predetermined network loads." '888 patent at 6:63-66, 9:50-53, 12:56-57. Each of these descriptions occurs explicitly in the context of how the adaption manager operates to adapt beams. *Id.* at 6:60-62, 9:46-50, 12:52-55. But even if Defendants' criticisms of the specification were correct—and the specification did not describe what was claimed or show that it was possible—those would be matters to be addressed under other doctrines of patent law, not indefiniteness.

III.   U.S. PATENT NO. 10,368,361 ("THE '361 PATENT")

A.   "quality status module configured to determine a respective status of a first frequency spectrum resource and a second frequency spectrum resource"

Like the above-addressed "adaption manager" term (*see supra* § II.A[3]), this "quality status module" term does not use any "means" language. Again, Defendants do not even address the presumption that § 112(f) does not apply, despite bearing the burden to rebut that presumption. *See* Resp. Br. at 19-21. And again, Defendants imply the term "quality status module" itself must have "structural significance in the art" and the "quality status" prefix itself must connote structure (*id.* at 19), but as addressed in Section II.A, there is no requirement the disputed term itself, divorced from the context of the evidence of record, connotes structure to a POSITA.

And as with "adaption manager," there is extensive intrinsic evidence, largely from the claim language itself, illustrating the "quality status module" is structural. In particular, the intrinsic evidence shows the "quality status module" has inputs (such as various information it

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[3] Like Defendants, Cobblestone incorporates the case law used in support of the "adaption manager" term in this "quality status module" section. *See* Resp. Br. at 20 n.4.

receives from the processor to which it is coupled), outputs (such as quality status determinations communicated to the processor to which it is coupled), and structural connections (such as coupling to the processor). *See* Op. Br. at 20-22 (and citations therein). Defendants assert that this disclosed structure is not sufficient, but do not explain why that is the case and do not cite any authority in support of that argument. Resp. Br. at 20. To the extent Defendants are relying on *Rain Computing*, that case is inapposite; the patentee in *Rain Computing* "fail[ed] to point to any claim language providing any structure" and the specification did not even mention the disputed term. 989 F.3d at 1006. Here, the claims connote structure and the specification extensively discusses the term.

Finally, as with "adaption manager," Defendants contend that Cobblestone ignores an alleged "how" requirement. Resp. Br. at 20-21. This argument fails for the same reasons discussed above. *See supra* § II.A. Section 112(f) does not apply to the "quality status module" term.

B. **"shared resource pool"**

Defendants fail to justify either the inclusion of the word "sub-optimal" in their construction or the rewriting of the word "or" in the claims to "and." As to "sub-optimal," the asserted claims expressly require assigning a "first frequency spectrum resource" to a "shared resource pool" based upon a determination it is a sub-optimal resource. '361 patent at 19:3-6, 20:37-40. Defendants appear to argue that *all* resources in the shared resource pool must be assigned based upon such a determination. Resp. Br. at 22. If that is Defendants' position, it should be rejected. The claims' plain language only requires that at least a "first" resource be assigned in this manner. '361 patent at 19:3-6, 20:37-40. To limit the claims to *only* this assignment, excluding potential additional, unclaimed functionality would be to improperly import limitations from the specification, based only on Defendants' interpretations of the specification.

Defendants likewise fail to explain why the claim term "or" should be rewritten as "and."

Asserted claim 17 requires assigning a resource from the shared pool to "*either* the uplink channel *or* the downlink channel" ('361 patent at 20:51-53), and the specification consistently refers to scheduling resources from the shared pool to uplink "or" downlink channels. Op. Br. at 25. Defendants cite to no example where the specification describes the same resource being assigned both to uplink and to downlink. They do cite to a statement that resources in the shared pool "may" be ranked for suitability for uplink and for downlink (Resp. Br. at 22-23 (quoting '361 patent 9:21-25)), but the only claim that mentions "ranking" is unasserted claim 7. '361 patent at 18:34-40. It would be improper to read the ranking requirement from the specification into other claims.

Defendants also misinterpret statements in Cobblestone's infringement contentions. Nothing in Cobblestone's infringement contentions says or implies that "there are no resources in the uplink resource pool and no resources in the downlink resource pool," as Defendants contend. Resp. Br. at 23. Rather, the contentions say that "[b]y *default*, all *available* frequency resources are in a shared pool." Ex. C at 11, 13 (emphasis added). But that is simply a statement that resources that have not otherwise been assigned default to being in the shared pool. The contentions make clear that there are resources that are not in the shared resource pool and that the base station can move resources in and out of that pool. The contentions state that "the base station is responsible for making radio resource decisions" and that when a UE is instructed to change bandwidth parts, "the old bandwidth part is reassigned to the shared resource pool." *Id.* at 13.

C.   "sub-optimal resource"

Defendants' indefiniteness arguments flow from a misreading of the phrase "sub-optimal … relative to other frequency spectrum resources." The claims do not involve evaluating a single resource and deciding whether it is, standing alone, either "optimal" or not—or in the parallel language used in the specification, whether it is "suitable" or not. *See* Op. Br. at 30. Rather, the claims require determining that one resource is sub-optimal—less suitable—*relative* to one or

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more other resources. *See id.* at 28. Defendants give no argument or evidence to the contrary. The supposed boundary between optimal and not optimal thus has no bearing on the claim scope or the definiteness inquiry.

Defendants' own cases illustrate why their indefiniteness arguments miss the mark. In *Berkheimer v. HP Inc.*, for example, the claim covered software that establishes a data archive, wherein the archive "exhibits minimal redundancy." 881 F.3d 1360, 1363 (Fed. Cir. 2018). Therefore, an objective boundary between minimal and non-minimal was required to provide a boundary to the claim. *Id.* Likewise *Halliburton Energy Services, Inc. v. M-I LLC* involved a claim for drilling "using a fragile gel drilling fluid," thus requiring a meaningfully precise boundary between fragile and non-fragile gels. 514 F.3d 1244, 1246, 1251-52 (Fed. Cir. 2008). But here, the claim does not require an objective boundary between "optimal" and "non-optimal" resources because it rather requires determining a resource is sub-optimal *relative* to one or more other resources.

Moreover, the intrinsic record provides ample and definite boundaries for the claimed determination that the first resource is sub-optimal *relative* to other resources, confirming to a POSITA that this is an objective determination based on objective information. *See* Op. Br. at 27-28.[4] Indeed, the claim itself specifically requires the determination is "based on the quality status of the first frequency spectrum resource," which is undisputedly objective and definite. There is simply no evidentiary or logical support for Defendants' statement that this claimed determination is "entirely subjective," or that two POSITAs would be unable to agree on how to evaluate the claimed quality status information in the claimed *relative* determination. Resp. Br. at 26.

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[4] The misstatement, Op. Br. at 27, that "a lower RIP is better than a lower [sic] RIP" was the result of an editing error by Plaintiff's counsel. The evidence unambiguously shows that a lower RIP is better than a *higher* RIP. '361 patent at 9:8-14, 10:18-22, 20:32-36; Cooklev Decl. ¶ 73.

Dated: April 9, 2024   Respectfully submitted,

                                                /s/ Reza Mirzaie
                                                Marc Fenster
                                                CA State Bar No. 181067
                                                Reza Mirzaie
                                                CA State Bar No. 246953
                                                Neil A. Rubin
                                                CA State Bar No. 250761
                                                Amy E. Hayden
                                                CA State Bar No. 287026
                                                James Pickens
                                                CA State Bar No. 307474
                                                Christian W. Conkle
                                                CA State Bar No. 306374
                                                Jonathan Ma
                                                CA State Bar No. 312773
                                                RUSS AUGUST & KABAT
                                                12424 Wilshire Blvd. 12th Floor
                                                Los Angeles, CA 90025
                                                Telephone: 310-826-7474
                                                rak_cobblestone@raklaw.com

                                                Andrea Fair
                                                Ward Smith & Hill, PLLC
                                                1507 Bill Owens Parkway
                                                Longview, Texas 75604
                                                (903) 757-6400
                                                andrea@wsfirm.com

                                                Attorneys for Plaintiff,
                                                Cobblestone Wireless, LLC

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CERTIFICATE OF SERVICE

I hereby certify that the counsel of record who are deemed to have consented to electronic service are being served on April 9, 2024, with a copy of this document via the Court's ECF system.

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/s/ Reza Mirzaie
Reza Mirzaie

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